

tion. 3. Although the risk is probably very small, it cannot be said to be absolutely *nil*. 4. It is open to question whether it is prophylactic at all.

Air Infection.—In tracing the sources of error in aseptic methods of operating, FLÜGGE (*Cent. f. Chir.*, 1897, No. 39) has reported some very interesting results which he has obtained from the experimental study of the infection which results from bacteria carried about as dust particles in currents of air in operating-rooms, or in minute particles of moisture that also float for a length of time in the air. These dry particles and drops of moisture float in the air of a room for four or five hours, and are carried by the currents in the room long distances. It was determined that such drops could be discharged into the air by coughing and sneezing, from the frequently infected mucous membranes of the nose and throat. Even talking loudly would infect plates at a considerable distance from the speaker.

Although the author does not intend to imply that this is the most frequent source of infection in cases of aseptic wound treatment, he does claim that such infection may take place, and that it is more plausible as a theory to believe that such infection occurs than to blame all such infection on a poor antisepsis of the skin in the field of operation. The pyogenic micro-organisms are found in the normal secretions of the nose and mouth of healthy individuals, and where carious teeth are present the danger of infection is certainly greatly increased.

The infection through the air may, therefore, be a ready explanation of many cases of infection hitherto unaccounted for. It can be occasioned either by the surgeon, his assistants, the nurses, the onlookers, or the patient himself, and a moderate distance of these persons from the operator does not in any wise preclude them as the source from which the infection may arise.

The coughing of the patient or stertorous breathing may be a source of infection in itself. Thus, although this is not a frequent source of infection, it is nevertheless a positive source which will account for some of the failures which occasionally occur in aseptic operations.

The Operative Treatment of Cleft Palate.—In a clinical lecture upon this subject, OWEN (*The Lancet*, January 29, 1898) gives the following practical advice :

When to operate : If the cleft is confined to the soft palate and the infant is in a satisfactory state of health, the operation may be done within a few months after birth. But if the hard palate is involved, he prefers to wait another year to avoid the danger of shock from the operation. He prefers to operate in all cases upon the entire cleft at once, as it is essential to the successful performance of the operation to detach in a measure all parts of the periosteum.

The child should never be operated upon till the general health and conditions are good or failure is courted. Carious teeth, enlarged tonsils, and adenoids should be removed before operation for the cleft is thought of. If a choice is possible, the operation should be done in mild, fine weather, so that the child can be taken out of doors soon.

The best position is on the back with the head hanging over the end of the

table, so that the blood, instead of finding its way into the larynx and stomach, may sink into the naso-pharyngeal dome and, welling up by the mouth or nostrils, may find harmless escape.

The anæsthetic preferred is chloroform given by Junker's apparatus. The form of gag is a difficult question, as none has been devised that always acts successfully. Smith's gag is the one he uses.

Operation: The first step is the removal of a continuous strip of mucous membrane from the margin of the cleft; this should be uniform in thickness and if possible be taken away in one continuous strip, so that no point will be left undenuded. The palate-knife should be thin-backed with a long cutting edge; old tonsil bistouries that have been frequently ground are very serviceable. Sponges should be firm and honeycombed, but not squeezed up. They should be about the size of a pigeon's egg and firmly attached to the holders.

The next step is a cut three-quarters of an inch long just inside the molar teeth of the superior maxilla. Passing through to the dome, branches of the descending palatine arteries are divided; the bleeding is checked by pressure. The periosteum is then released from the bone by variously curved raspatories. This lifting of the muco-periosteal flaps releases the flaps from tension and permits the closure of almost any size of cleft. The velum must be disconnected from its fibrous attachment to the bony palate, and the thoroughness with which this is done has a marked influence upon the success of the operation. The best way of doing this is by using a pair of scissors bent on the flat almost to a right angle, and cutting through the nasal mucous membrane of the velum.

The author prefers silver-wire sutures inserted, beginning at the incisor teeth. The silver sutures are best fastened by ordinary torsion forceps. The lateral cuts are ignored, the bleeding having been stopped by pressure.

Failure does not preclude a second operation, and in an instance cited the infection which took place seemingly created a temporary immunity which rendered the second operation successful.

Removal of a Bullet from the Brain Located with the Aid of the Röntgen Rays.—BRAATZ (*Cent. f. Chir.*, 1898, No. 1) reports an interesting case in which he was able, after two attempts, to remove a bullet from the brain substance, the patient making a complete recovery.

The symptom most complained of was an intense pain that was unbearable when the head was held to the left side. After a number of skiagraphs had been taken, one was obtained which showed the ball in the anterior portion of the brain. In this skiagraph an iron wire had been placed above the ear and extending onto the forehead, while in front of the ear and perpendicular to the first wire a measurement was made in centimetres by means of horizontal pieces of wire.

The first operation consisted in the formation of a bone and integument flap by means of Gigli's wire saw, the opening being increased in size by the use of rongeur forceps. The ball, however, was not found, even after the dura was opened and the brain palpated. The difficult breathing of the patient necessitated a cessation in operating, and the wound was closed and healed by primary union. There was, however, no relief from the symptoms,